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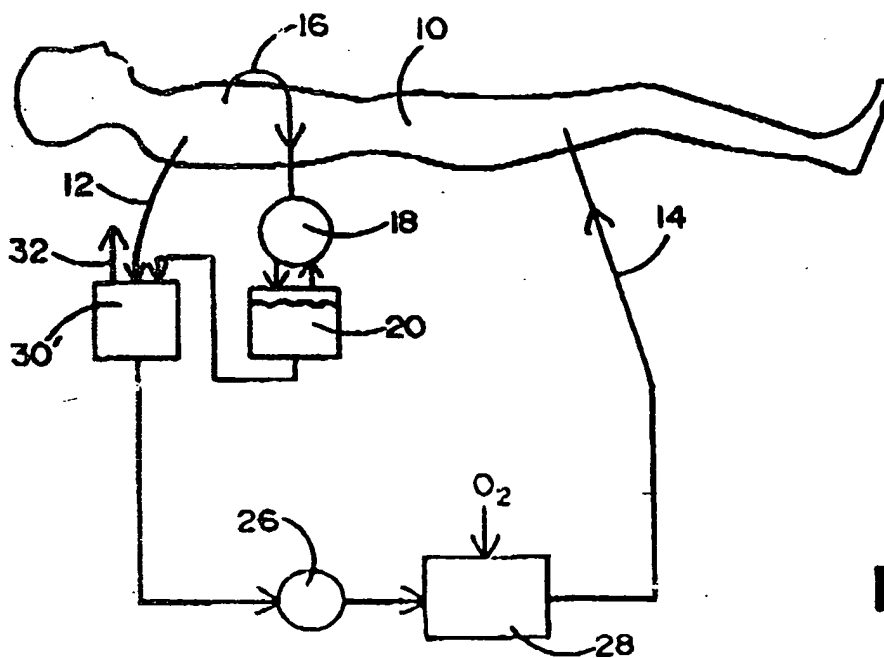
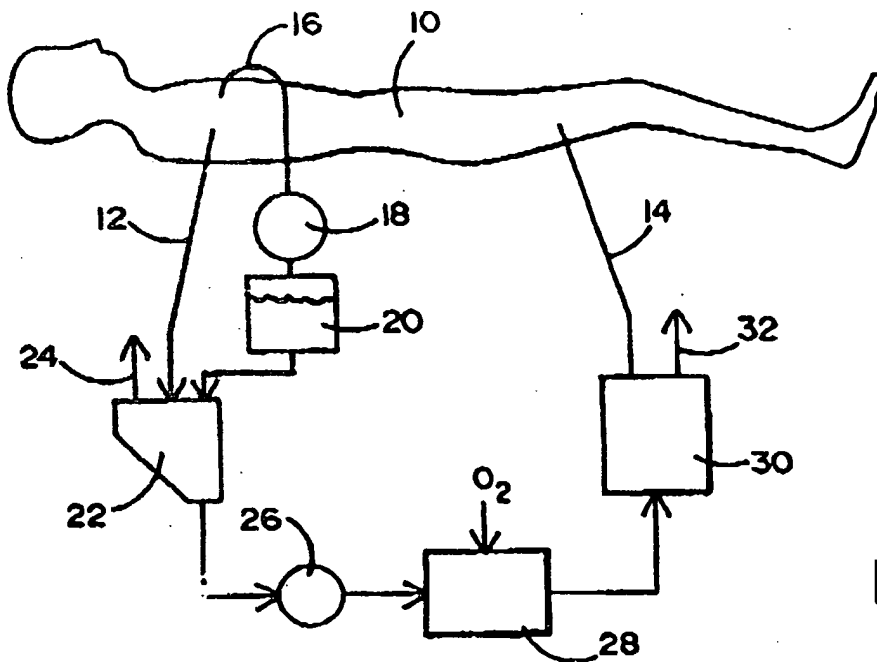
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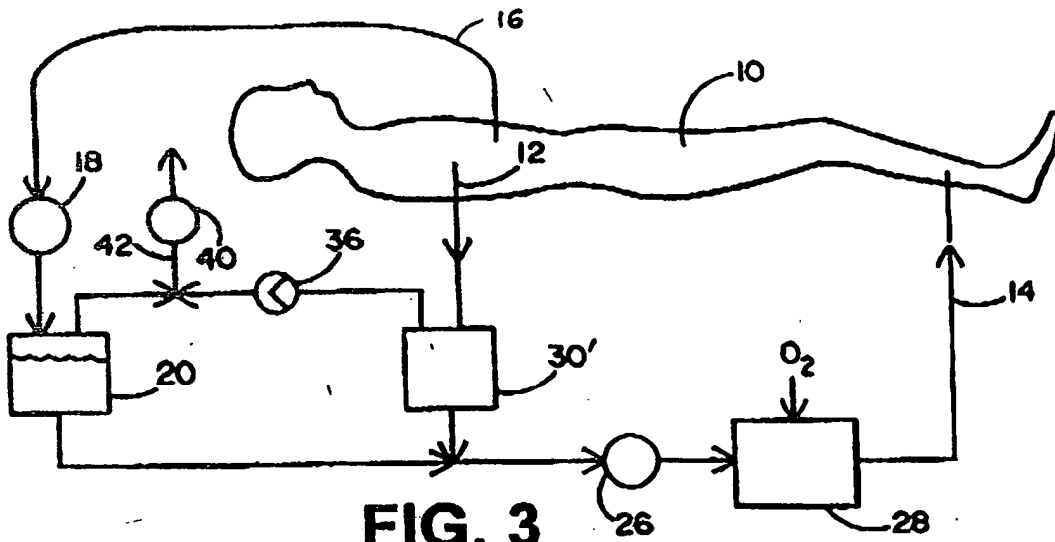
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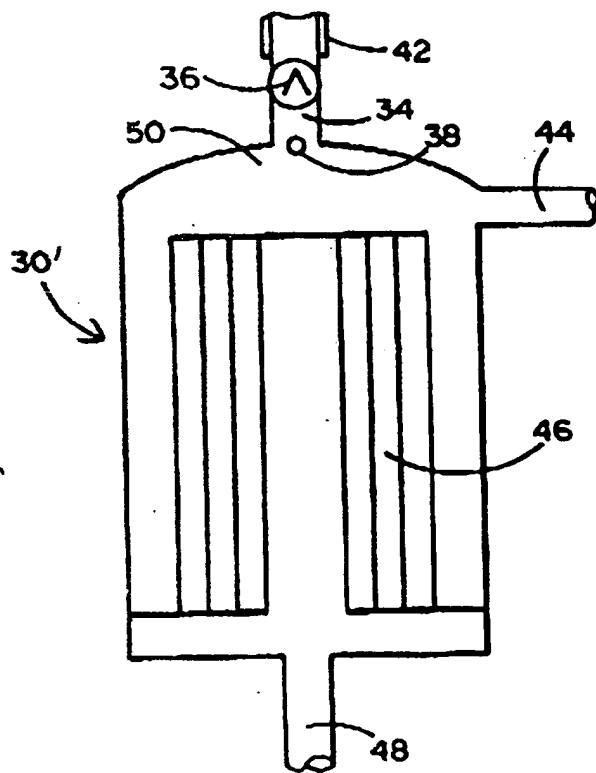
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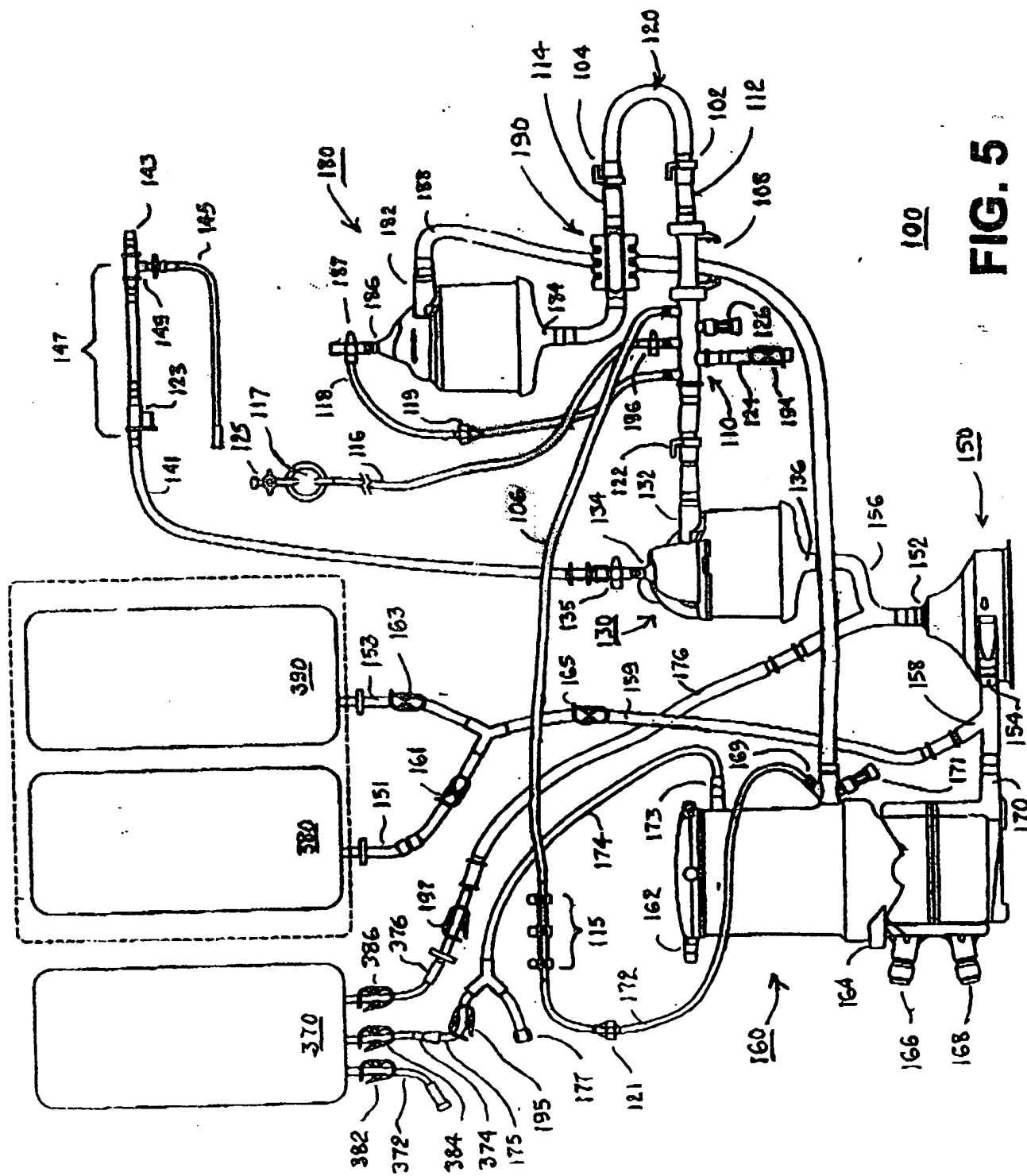




**FIG. 3**  
PRIOR ART



**FIG. 4**  
PRIOR ART



**FIG. 5**

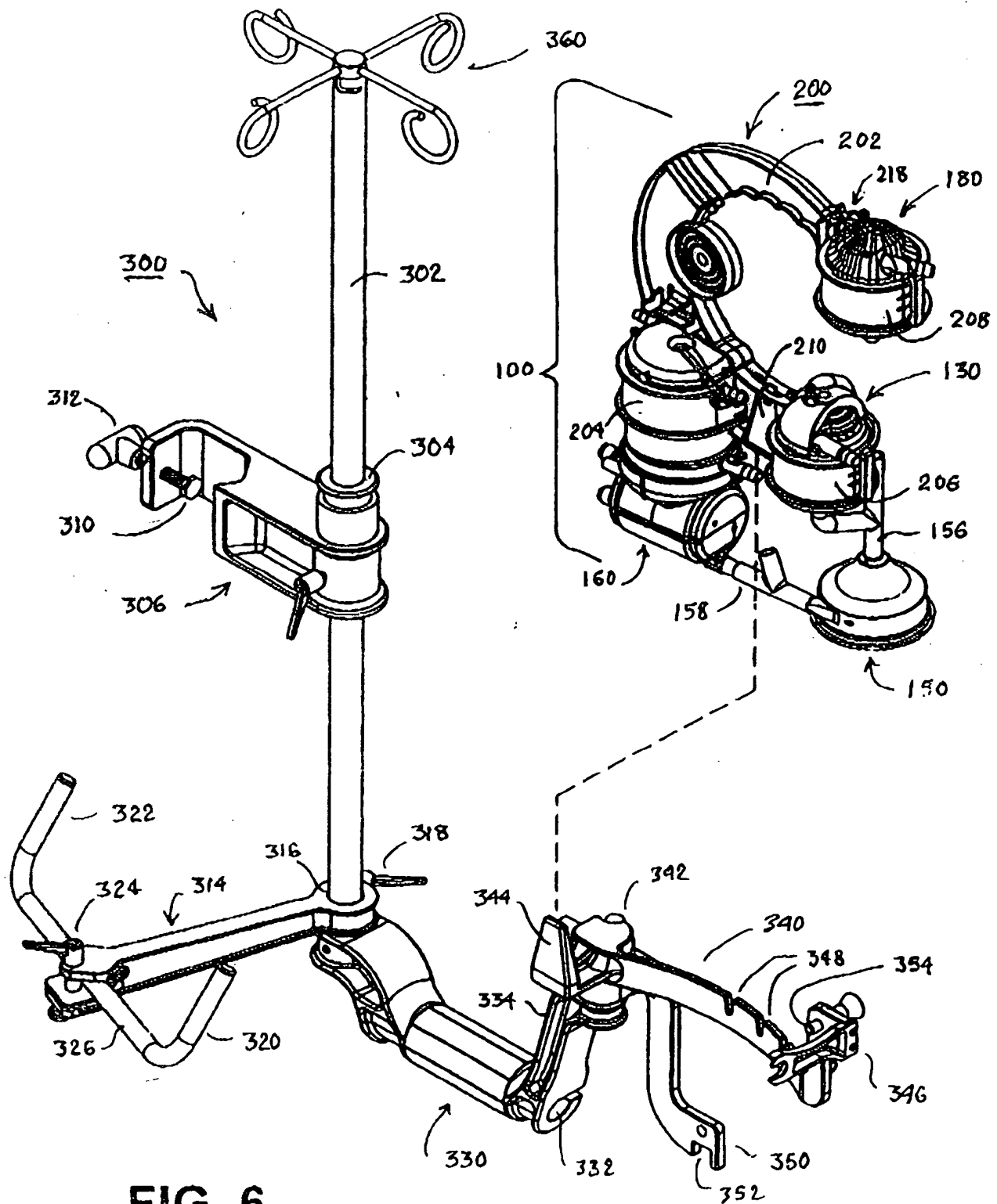
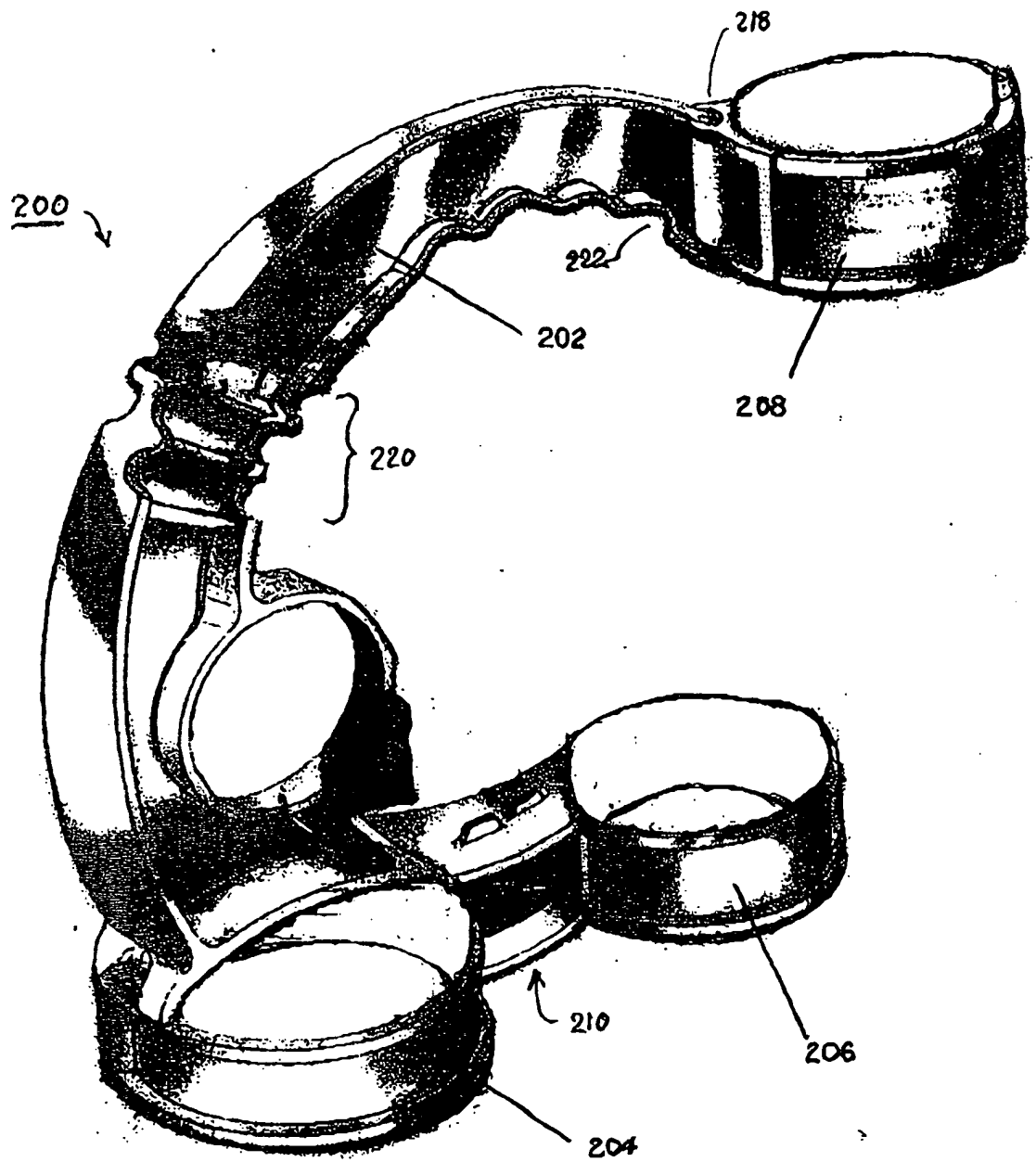


FIG. 6



**FIG. 7**

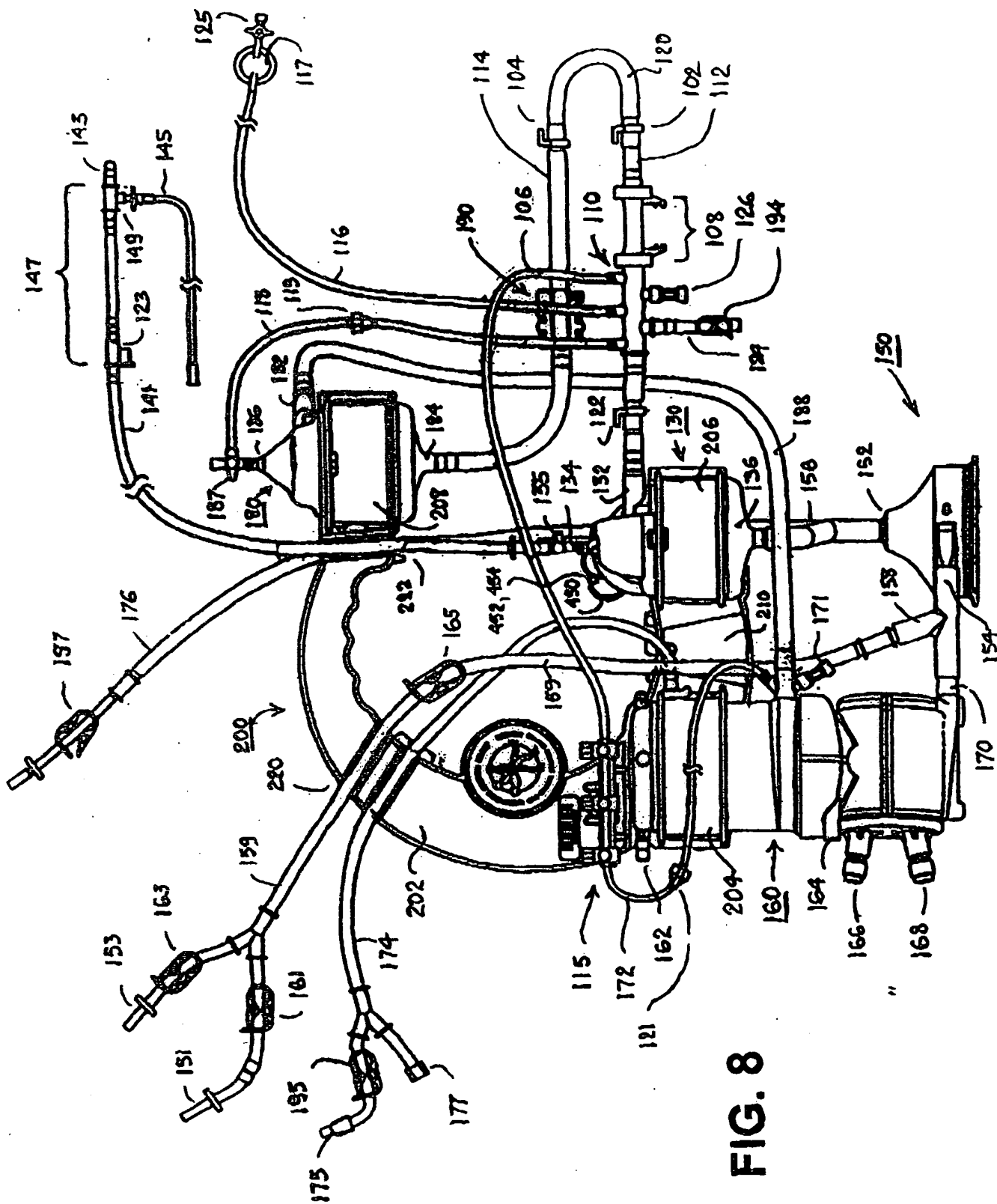


FIG. 8

390

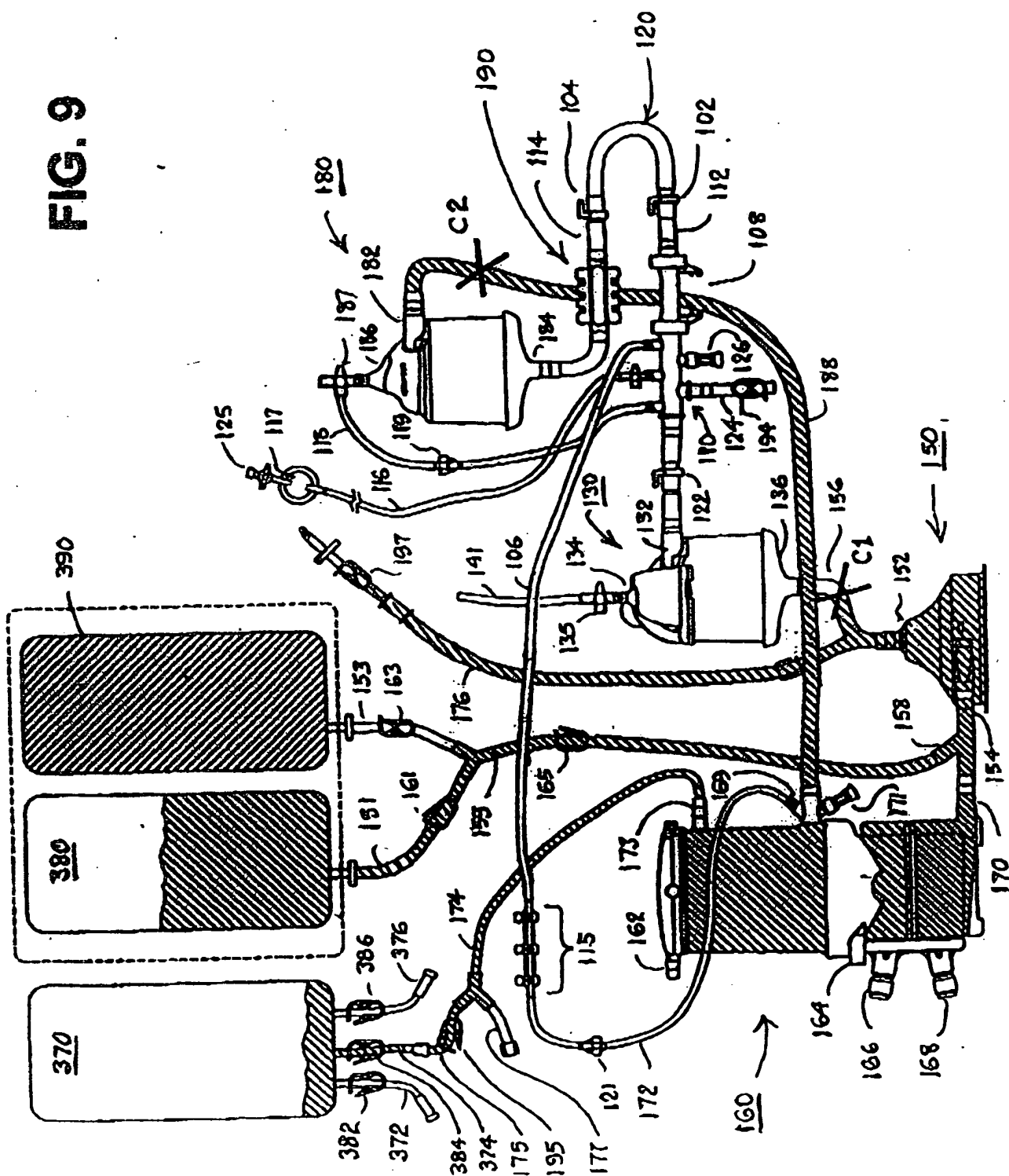
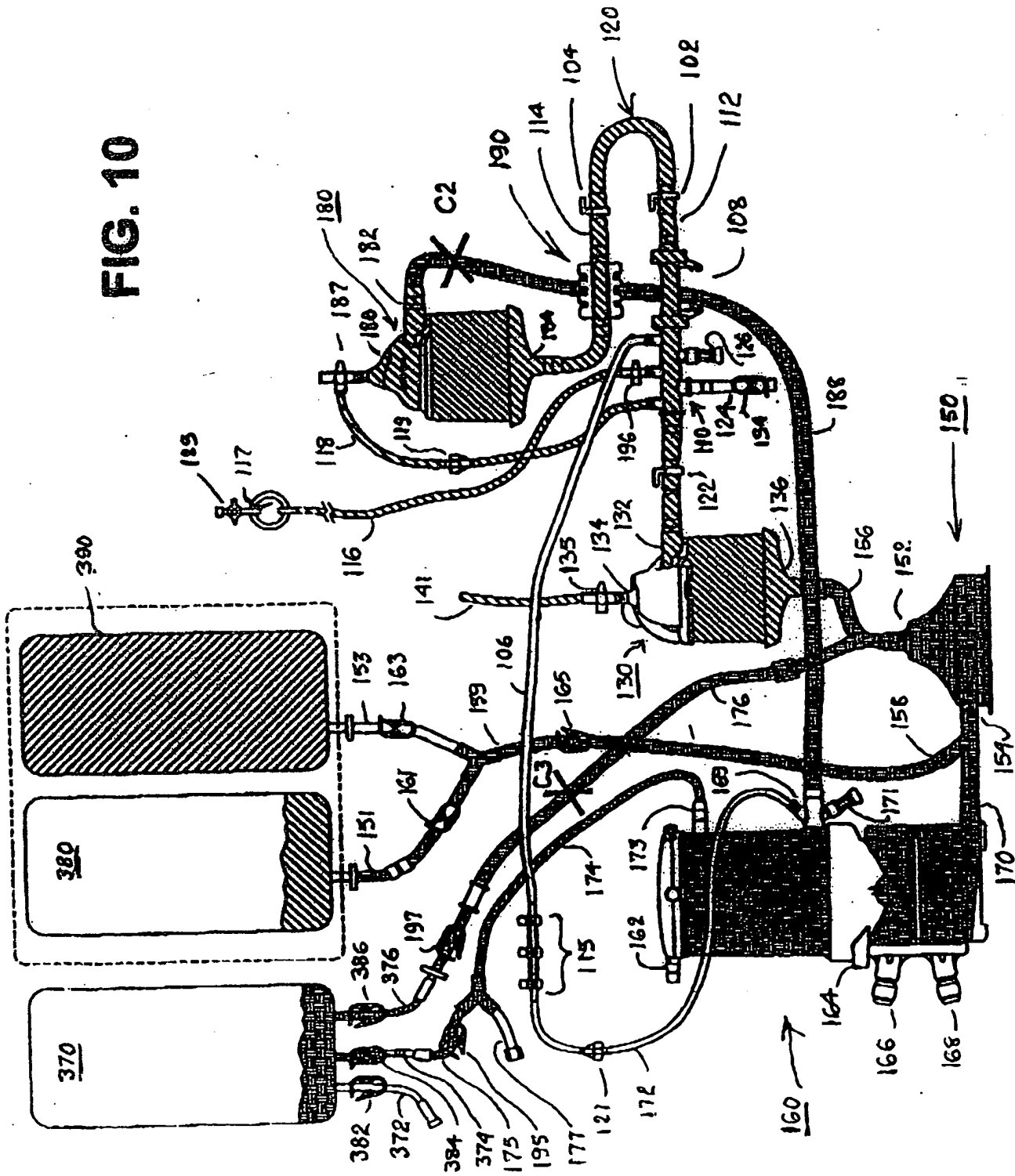
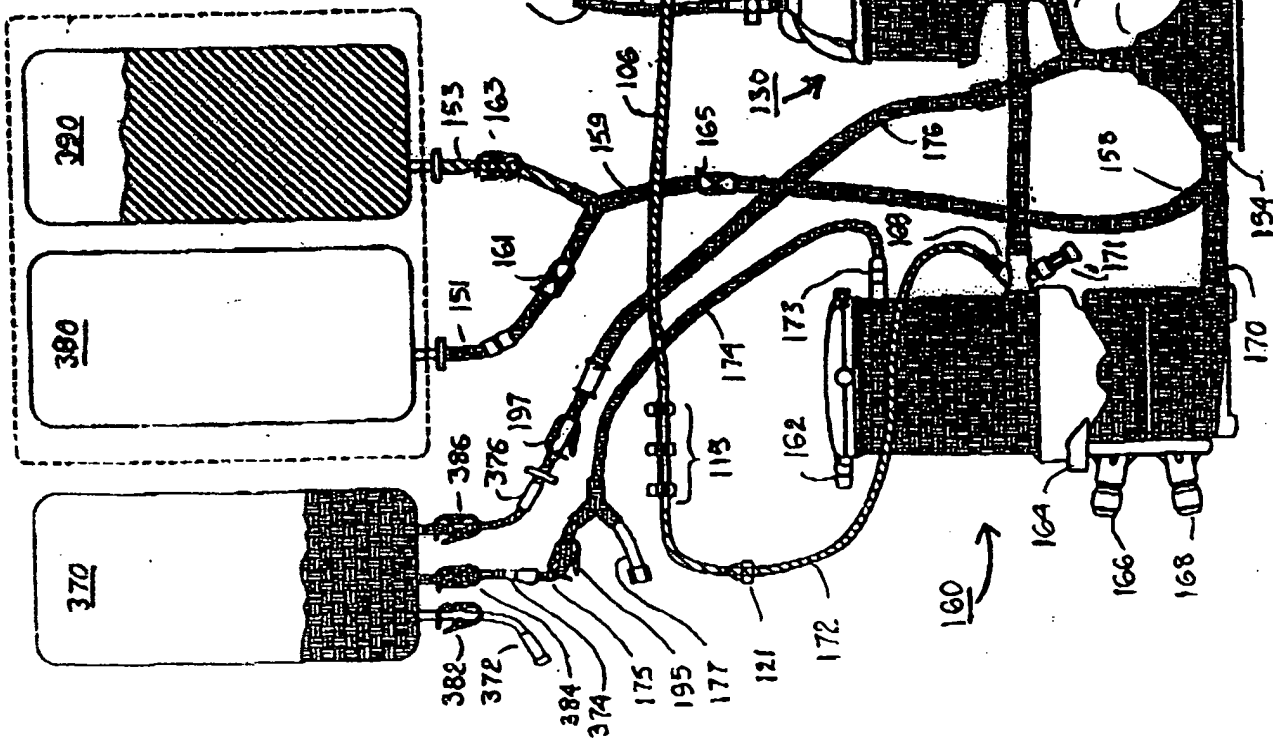




FIG. 10



**FIG. 11**



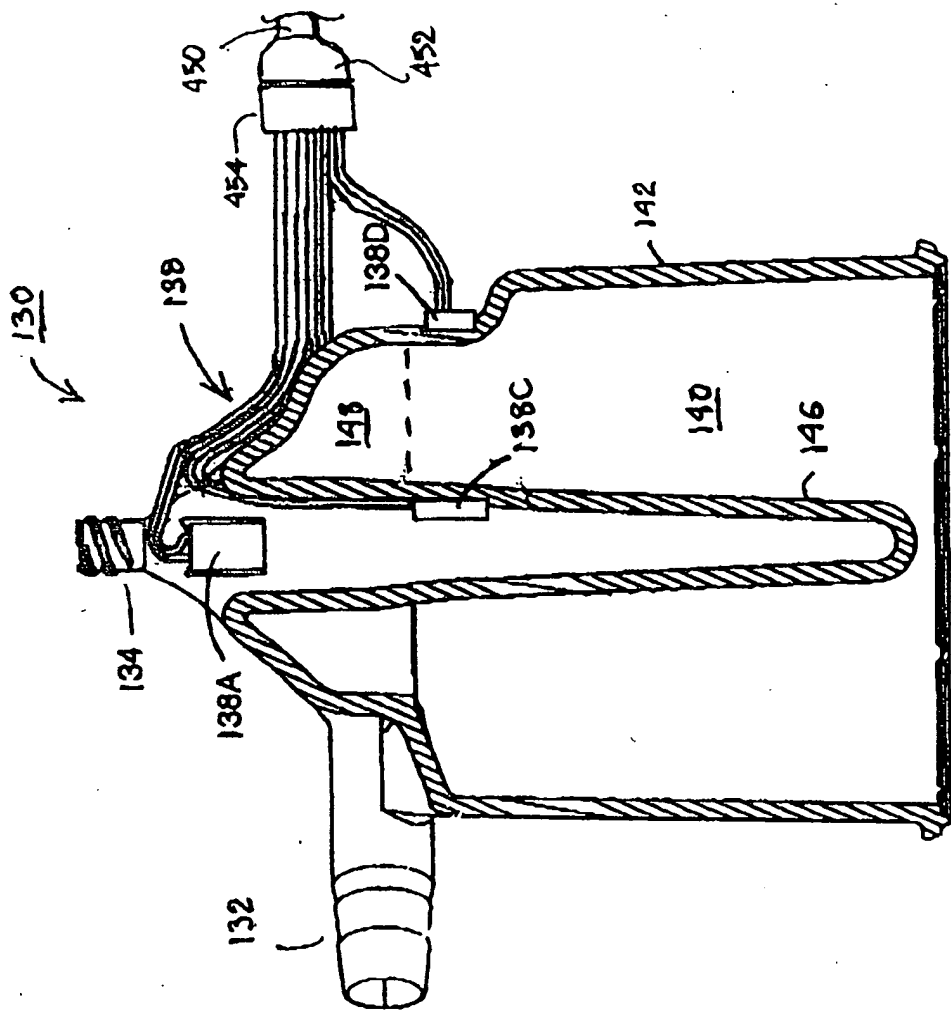


FIG. 12B

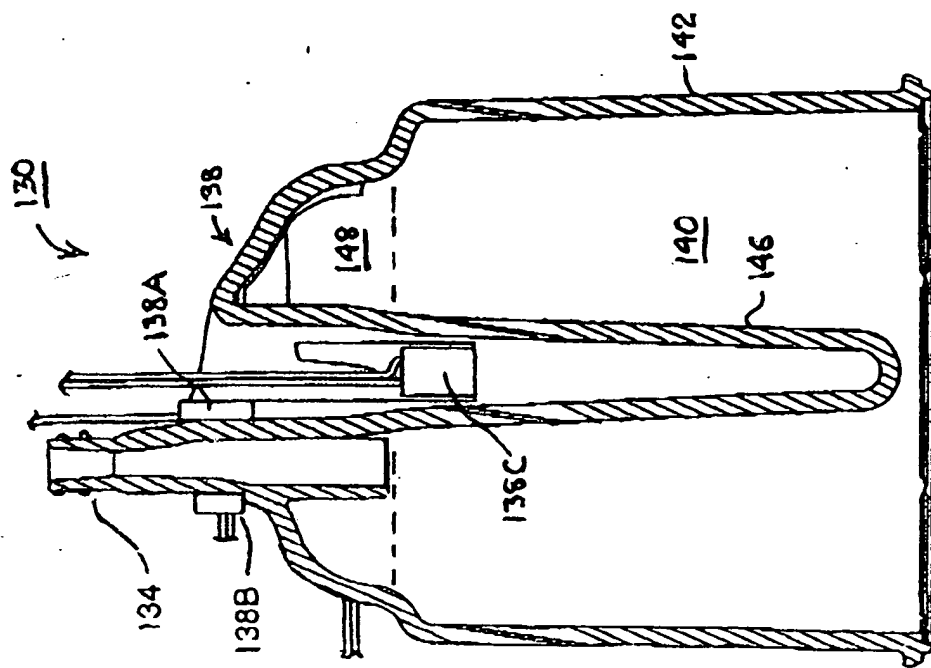
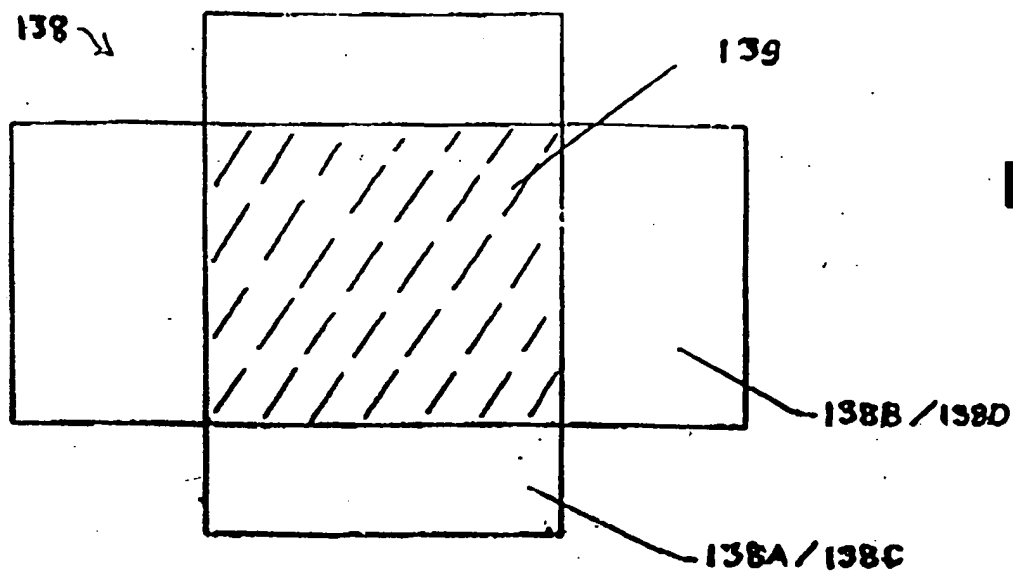
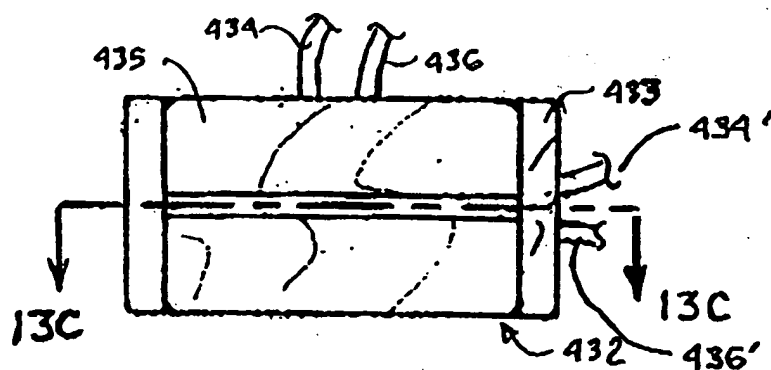


FIG. 12A

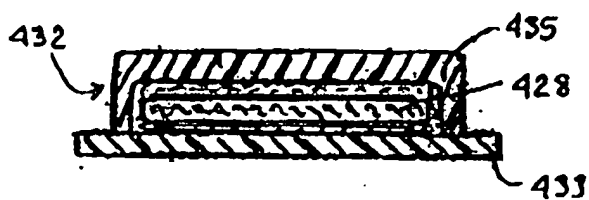


**FIG. 13A**

**FIG. 13B**



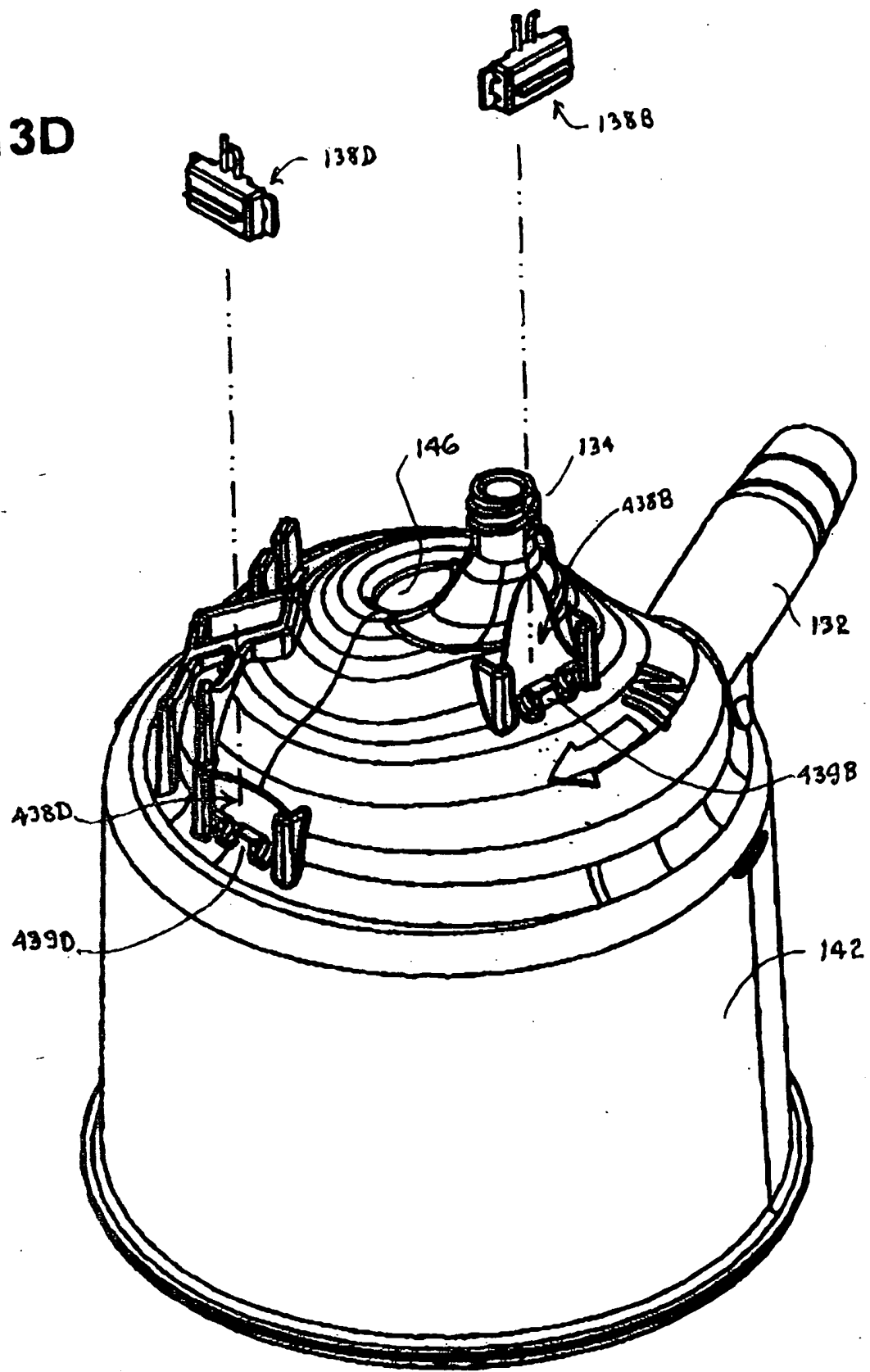
138A, 138B, 138C, 138D



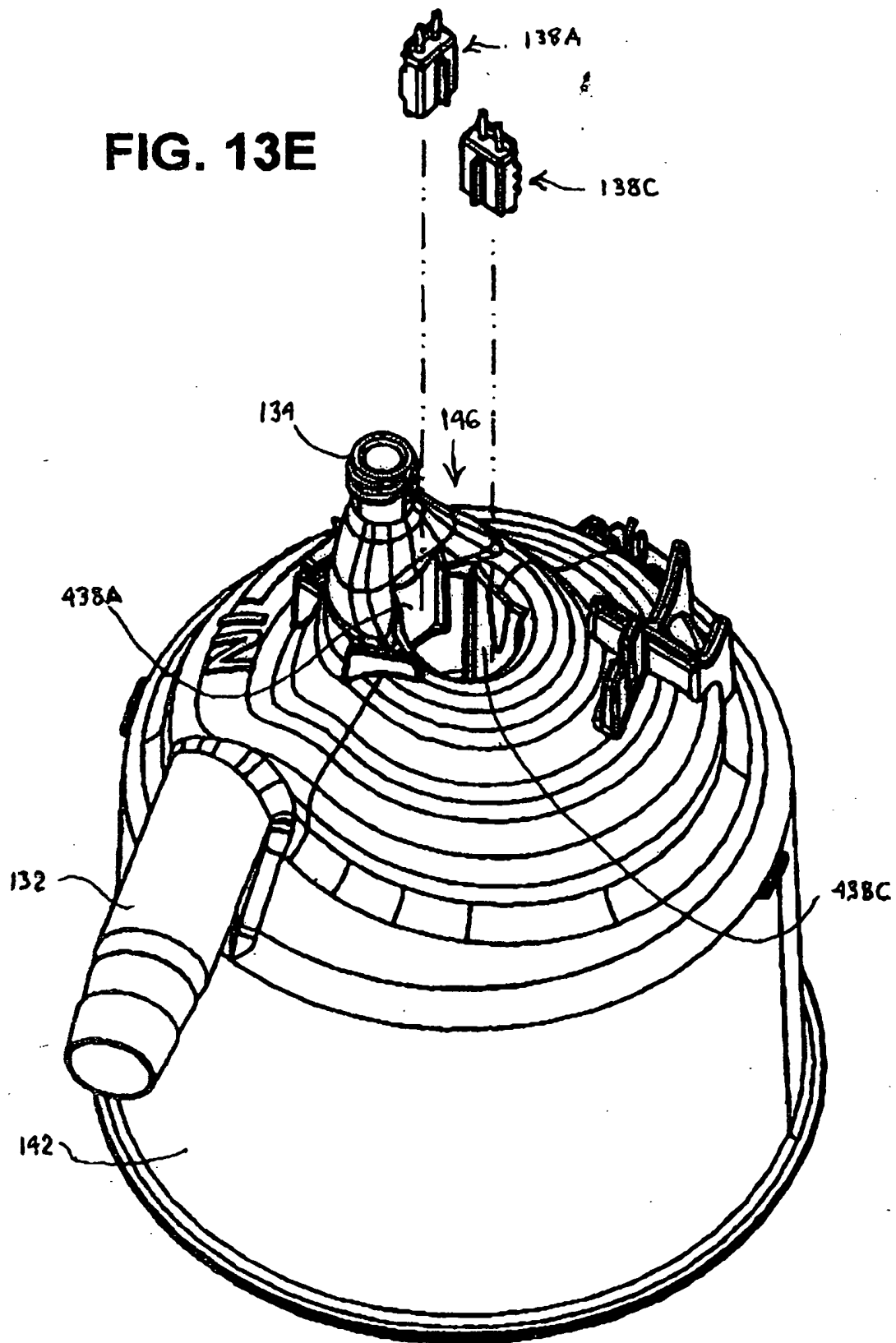
138A, 138B, 138C, 138D

**FIG. 13C**

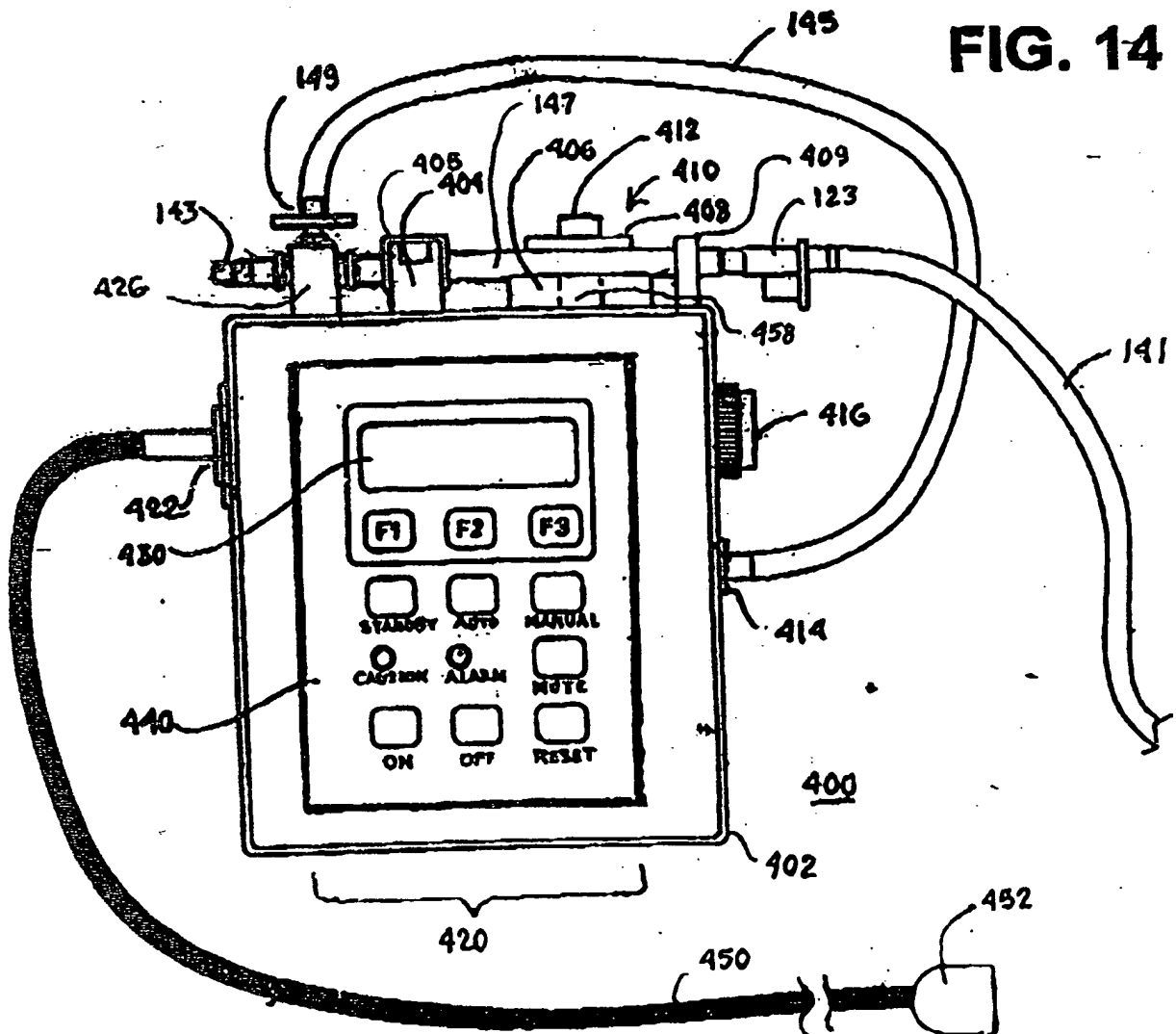
FIG. 13D



**FIG. 13E**



**FIG. 14**



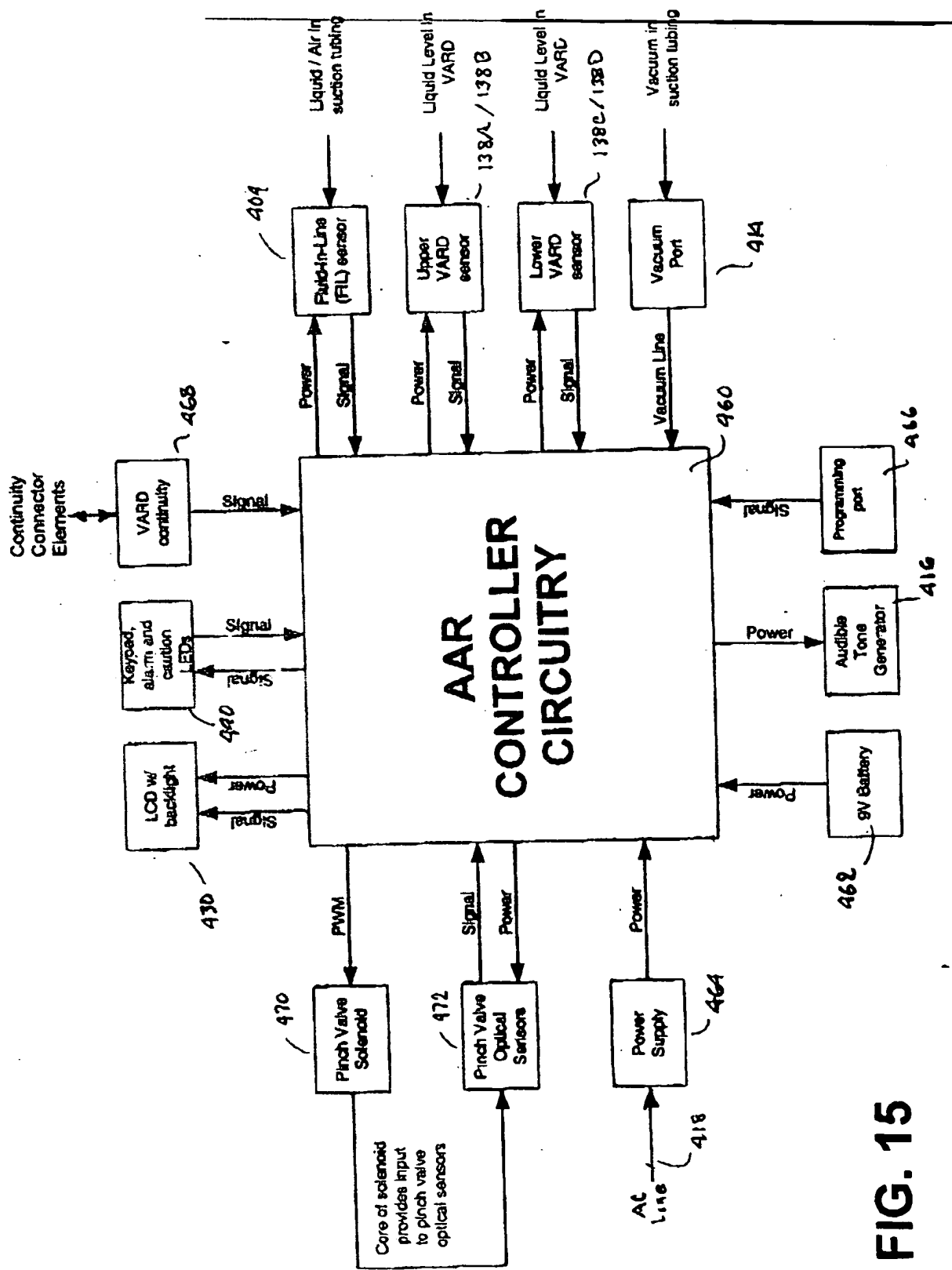
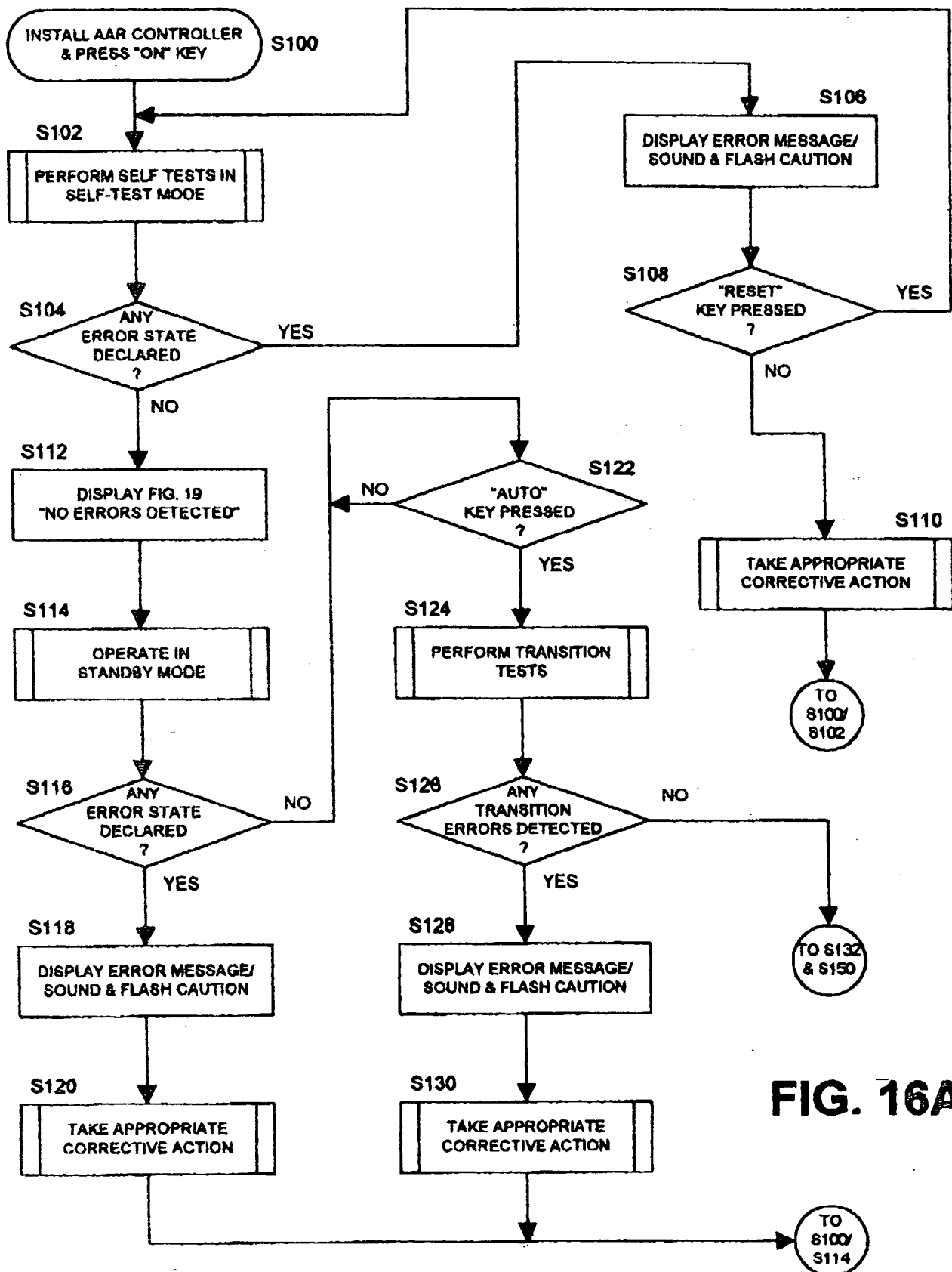
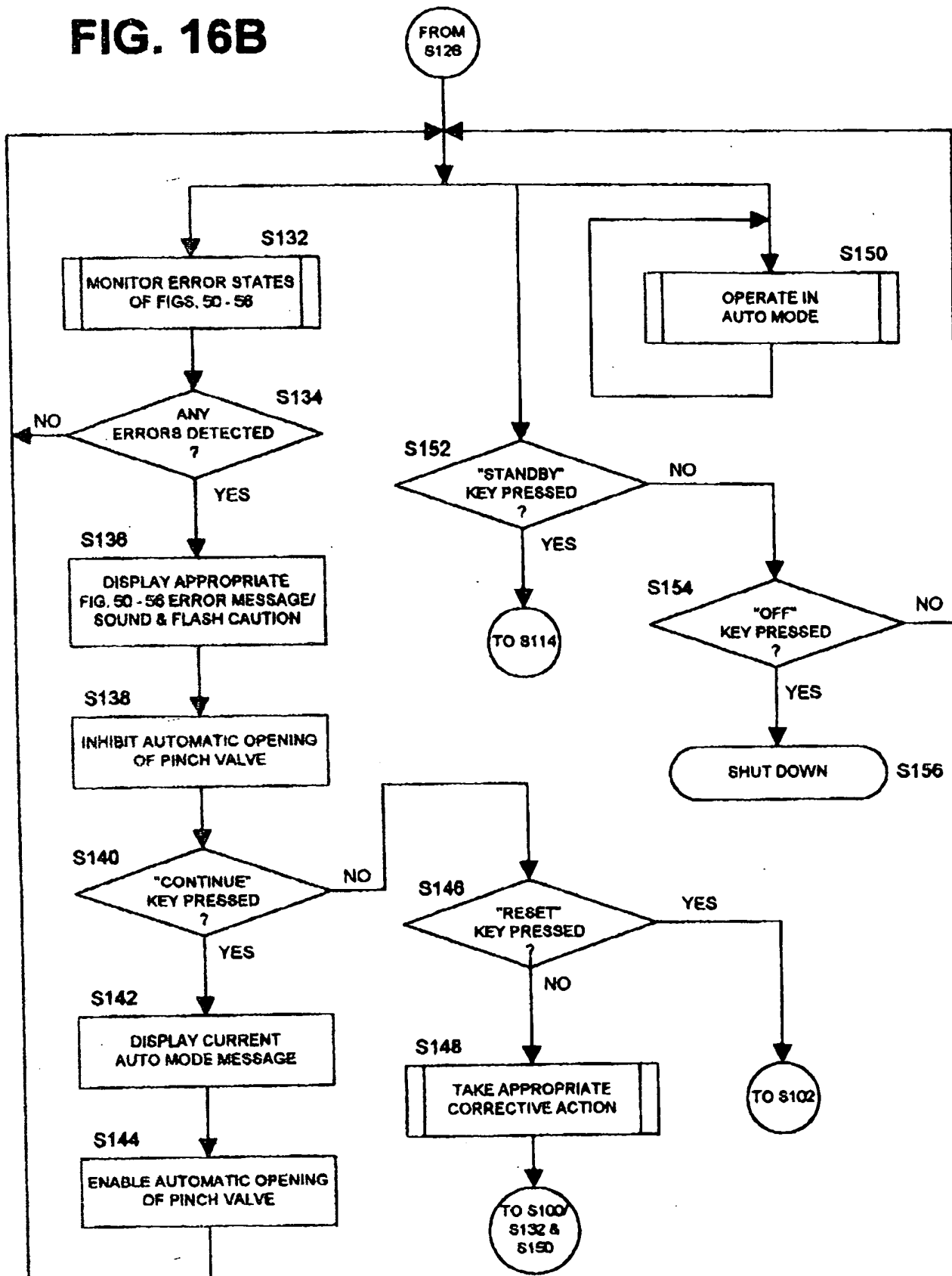


FIG. 15



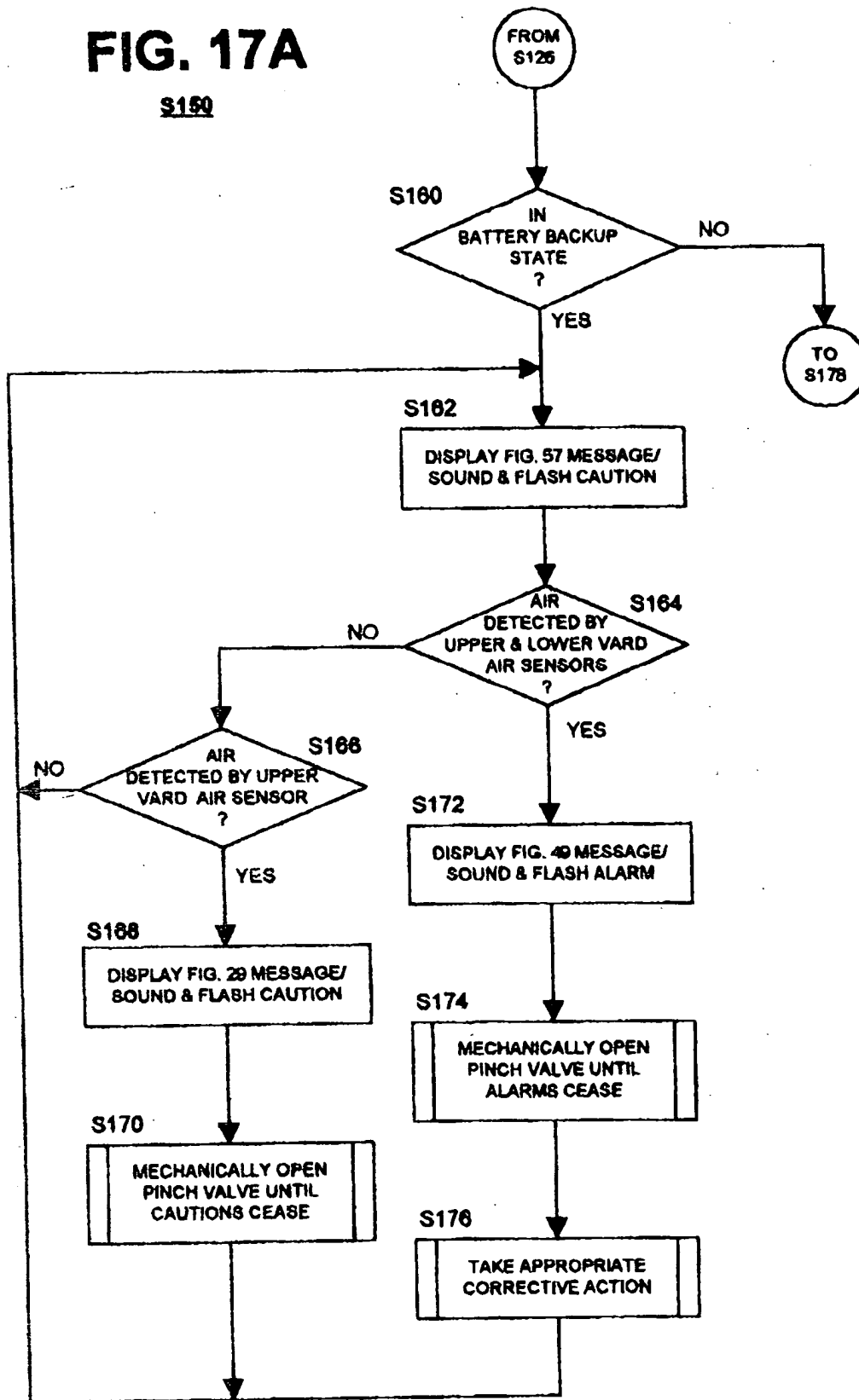


**FIG. 16B**



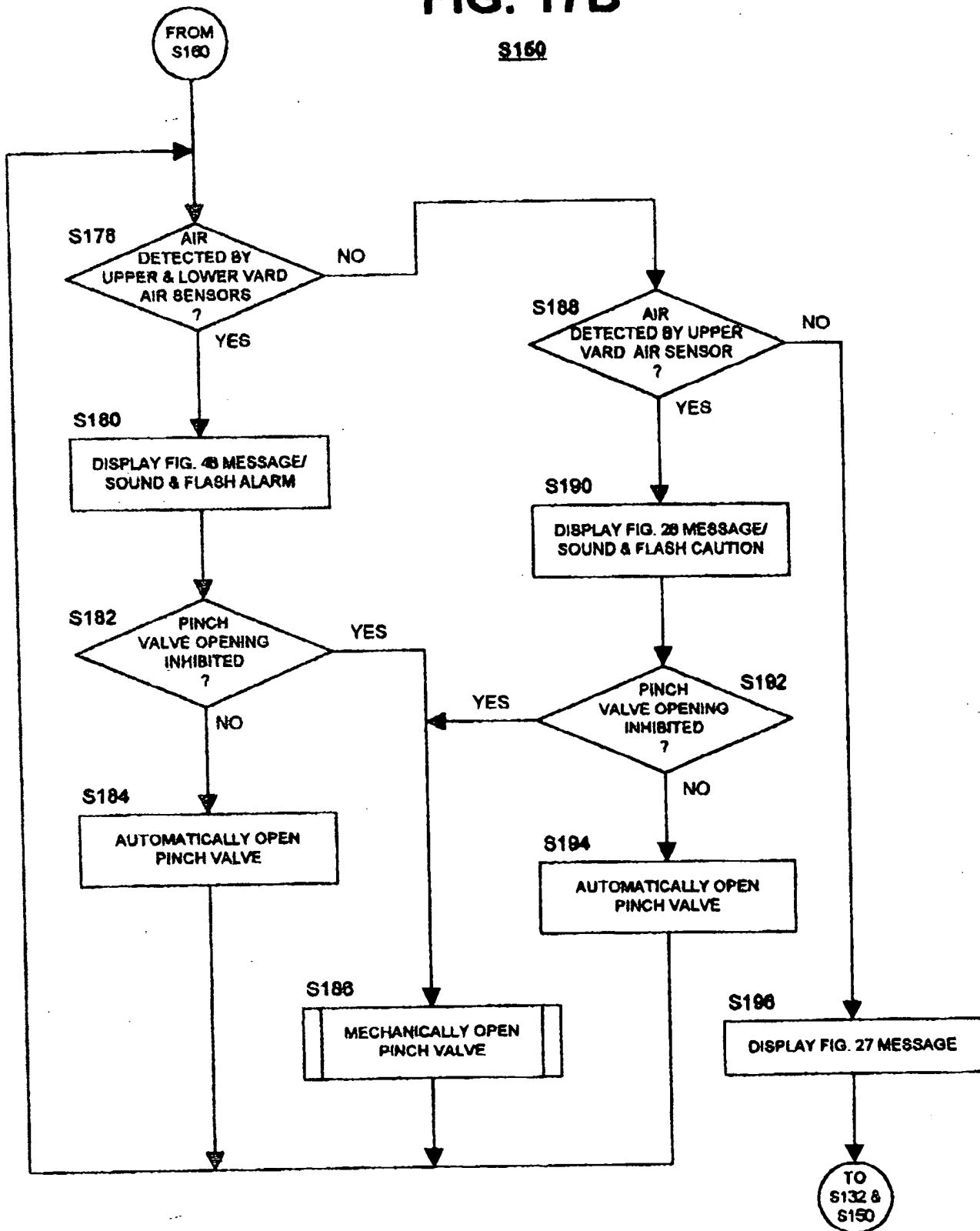
**FIG. 17A**

**S150**



# FIG. 17B

S160



**FIRMWARE VERSION X.XX**  
**PERFORMING SELF TEST**

**FIG. 18**

**SELF TEST COMPLETE**  
**NO ERRORS DETECTED**

**FIG. 19**

**VALVE CLOSED**  
**STANDBY MODE**  
**SYSTEM READY**  
**MENU**

**FIG. 20**

**LANG SENSOR RETURN**

**FIG. 21**

**SELECT LANGUAGE**  
**ENGLISH**  
**< > SELECT**

**FIG. 22**

**FLUID SENSOR TEST**  
**SENSOR STATUS**  
**AIR**  
**RETURN**

**FIG. 23**

**FLUID SENSOR TEST**  
**SENSOR STATUS**  
**FLUID**  
**RETURN**

**FIG. 24**

**VALVE OPEN**  
**STANDBY MODE**  
**SYSTEM READY**  
**MENU**

**FIG. 25**

**VALVE OPEN  
STANDBY MODE  
BATTERY BACKUP ON  
MENU**

**FIG. 26**

**SELF TEST COMPLETE  
CRC FAILURE  
REPLACE AAR CONTROLLER**

**FIG. 30**

**VALVE CLOSED  
AUTOMATIC MODE**

**FIG. 27**

**SELF TEST COMPLETE  
VALVE STUCK OPEN  
REPLACE AAR CONTROLLER**

**FIG. 31**

**VALVE OPEN  
AUTOMATIC MODE  
AIR IN VARD**

**FIG. 28**

**SELF TEST COMPLETE  
VALVE STUCK CLOSED  
REPLACE AAR CONTROLLER**

**FIG. 32**

**MANUAL OPERATION  
OPEN THE VALVE**

**FIG. 29**

**SELF TEST COMPLETE  
AAR CONTROLLER FAILURE  
REPLACE AAR CONTROLLER**

**FIG. 33**

**SELF TEST COMPLETE  
LOW BATTERY**

**CONTINUE?**

**FIG. 34**

**VALVE CLOSED  
STANDBY MODE  
AIR IN VARD**

**MENU**

**FIG. 38**

**SELF TEST COMPLETE**

**NO BATTERY BACKUP**

**CONTINUE?**

**FIG. 35**

**VALVE CLOSED  
STANDBY MODE  
LOW SUCTION**

**MENU**

**FIG. 39**

**SELF TEST COMPLETE**

**BATTERY BACKUP ON**

**CONTINUE?**

**FIG. 36**

**VALVE CLOSED  
STANDBY MODE  
BATTERY BACKUP ON**

**MENU**

**FIG. 40**

**VALVE CLOSED  
STANDBY MODE  
VARD NOT CONNECTED**

**MENU**

**FIG. 37**

**VALVE CLOSED  
STANDBY MODE  
LOW BATTERY**

**MENU**

**FIG. 41**

**VALVE CLOSED  
STANDBY MODE  
NO BATTERY BACKUP  
MENU**

**FIG. 42**

**AAR CONTROLLER FAILURE  
REPLACE AAR CONTROLLER**

**FIG. 46**

**VARD NOT CONNECTED  
CONTINUE?**

**FIG. 43**

**LOW SUCTION  
CONTINUE?**

**FIG. 47**

**CHECK VALVE TUBING  
CONTINUE?**

**FIG. 44**

**VALVE OPEN  
TOO MUCH AIR  
ENTERING VARD**

**FIG. 48**

**CHECK VARD SENSORS  
CONTINUE?**

**FIG. 45**

**MANUAL OPERATION  
OPEN THE VALVE**

**FIG. 49**



**AUTOMATIC MODE  
VALVE STUCK OPEN  
CONTINUE?**

**FIG. 50**

**AUTOMATIC MODE  
VARD SENSOR FAILURE  
CONTINUE?**

**FIG. 54**

**AUTOMATIC MODE  
VALVE FAILURE  
CONTINUE?**

**FIG. 51**

**VALVE CLOSED  
AUTOMATIC MODE  
LOW SUCTION**

**FIG. 55**

**AUTOMATIC MODE  
VALVE STUCK CLOSED  
CONTINUE?**

**FIG. 52**

**AUTOMATIC MODE  
VARD NOT CONNECTED  
CONTINUE?**

**FIG. 56**

**SYSTEM FAILURE  
BLOOD BEING REMOVED  
CONTINUE?**

**FIG. 53**

**AUTOMATIC MODE  
BATTERY BACKUP ON**

**FIG. 57**